

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ**  
**ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ**  
**МІСЬКОГО ГОСПОДАРСТВА імені О. М. БЕКЕТОВА**

**МЕТОДИЧНІ ВКАЗІВКИ**

для організації самостійної роботи  
з навчальної дисципліни

**ІНОЗЕМНА МОВА**  
**(англійська мова)**

*(для студентів I курсу денної форми навчання спеціальностей  
275 – Транспортні технології та  
073 – Менеджмент (спеціалізація «Логістика»))*

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## INTRODUCTION

These educational materials are designed for the ESP students of the 1<sup>st</sup> year of studies of Transport Technologies and Logistics to develop their knowledge and skills in English.

This manual is based on the authentic texts from different sources. It contains the tasks for reading and translation, vocabulary tasks and tasks for self-study. The manual consists of 5 units and is expected to be covered during student's self-study practice.

Each unit contains:

- pre-reading activity (questions and tasks)
- an authentic text for reading, translation and discussion in class;
- comprehension exercises;
- key vocabulary according to the topic. All key words are taken from the basic text where they are typed in italics;
- exercises for memorization and mastering key vocabulary;

The manual can be recommended for student's self-study.

## UNIT 1. FOREIGN LANGUAGES IN PEOPLE'S LIFE

### Language Questionnaire

1. How long have you been studying English?
2. Why did you start learning this language?  
Did you learn any other foreign languages before you started to study English?
3. Do you enjoy learning this language?
4. What do you like most of all?
  - a) speaking English to your friends, teachers and native speakers;
  - b) reading English books in translation and in the original;
  - c) listening to and understanding English songs;
  - d) watching video films in the original;
  - e) doing grammar exercises;
  - f) doing English crosswords and puzzles;
  - g) other.
5. What areas of the language do you find most difficult to study?
  - a) grammar; b) vocabulary; c) pronunciation.
6. Which language skill is your weak point?
  - a) speaking; b) listening; c) writing; d) reading.
7. Do you work at your language systematically or from time to time?
8. What is the most boring aspect of English for you?
9. What do you think is the best way to learn pronunciation (grammar, vocabulary)?
10. Do you prefer British or American English? Why?
11. Do you think it is possible to learn a foreign language perfectly?
12. What are you going to need foreign languages for in your future job?
  - a) To act as an interpreter.
  - b) To be entertained when you are abroad.
  - c) To entertain foreign guests.
  - d) To work as a foreign language teacher.
  - e) To make travel and hotel arrangements when you travel abroad.
  - f) To read articles in scientific and technical journals.

### Task 1. Read the text and decide if the statements after it are true or false

#### English as a World Language

English is losing its political and cultural associations and becoming the property of all cultures. Over 70 countries in the world use English as the official and semi-official language, and in 20 more English occupies an important position. It is the main foreign language taught within most school systems worldwide, many newspapers are published in English and it is the language of much radio and television broadcasting. English is the language of international business, the main

language of airports, air traffic control and international shipping. It is the language of science, technology and medicine, and it is estimated that two-thirds of all scientific papers today are first published in English. It is the language of diplomacy and sport; it is one of the working languages of the United Nations and the language used by the International Olympic Committee. International pop culture and advertising are also dominated by English. 70% of the world's mail is written in English, and 80% of all information in electronic retrieval systems is stored in English.

English infiltration of foreign languages is often regarded with horror. One of the Presidents of France, Pompidou, recommended a return to totally unpolluted French with an abolition of all anglicisms. In official documents “fast food” and “jumbo jet” were to be referred to by French expressions instead. But it would be difficult to eradicate the use of such familiar French terms as “le weekend”, “le sandwich” or “le parking”. French is not the only “polluted” language. In German we find “der Babysitter”, “der Bestseller” and “der Teenager”. “Weekend ” turns up again in Italian, where we can also find “la pop art” and “il pop corn”. “Jeans” is found in almost every language of the world, and in Spanish we also have “pancakes”, and “sueter” (sweater). Russian young people like to wear the latest trainer-style “shoozy”. But this invasion is not one-sided. Other languages have quietly been getting their own back for a long time. Native English speakers may think they are speaking “pure” English when they talk about the alphabet, the traffic, a mosquito, a sofa, a garage, their pyjamas or their boss, but Greek, Italian, Spanish, Arabic, French, Hindi and Dutch speakers never know better!

### **Statements:**

1. English is losing the importance for the world culture T/F
2. More than 90 countries in the world use English as their official and semi-official language T/F
3. English is one of the main languages for mass-media T/F
4. English is the working language of all international airlines T/F
5. All scientific papers today are first published in English T/F
6. The staff of all foreign embassies should know English T/F
7. Some European countries resent the peaceful invasion of English T/F
8. English is the only language that “pollutes” other languages T/F
9. It is impossible to preserve language purity in the age of computer technologies T/F

**Task 2. Read and translate the text. Correct statements given below it.**

### **One world – One language?**

Many people feel that the only realistic chance of breaking the foreign language barrier is to use natural language as a world lingua franca. Today, English is

the main contender for the position of world lingua franca.

There are few competitors. Several other languages have an important local role as a lingua franca but no comparable level of international use, such as Russian in Eastern Europe, or Spanish in South and Central America. More people in the world speak Chinese than any other language, but in the West Chinese is too unfamiliar to be a serious contender. French is still widely used, but far less than it was a century ago.

Many factors contribute to the gradual spread of a language – chiefly political and military might, economic power, and religious influence ( all of which artificial languages lack ). These same factors mean that the development of a world language is not viewed with enthusiasm by those who would have to learn it. Such a language, it can be argued, would give its organizing culture an unprecedented influence in world affairs and scientific research. For example, scientists who used it as a mother tongue would be in a privileged position: they would have to spend time learning it and would more easily assimilate ideas expressed in it.

Furthermore, it is thought, a world language would inevitably erode the status of minority languages and pose a threat to the identity of nations. Many people thus view the current progress of English towards world language status with concern and often with antagonism.

Ironically, the main danger to the growth of a world language comes from within. As the language becomes used in all concerns of the world, by people from all walks of life, it begins to develop new spoken varieties which are used by local people as symbols of their identity.

In the course of time these new varieties might become mutually unintelligible. It cannot be predicted how far this diversification will affect English. Linguistic predictions have a habit of being wrong. A hundred years ago, predictions were being made that British and American English would by now be mutually unintelligible. It is not always easy to predict the trend that will result from increased modern contacts through travel and communications.

### **Statements:**

1. There is an opinion that none of the existing languages can be used as a world language by all peoples T/F
2. English, Chinese, Russian and French have equal opportunities of becoming a lingua franca T/F
3. English is the most widely spoken language of the world T/F
4. A lot of people in the world would like to learn an artificial language to be able to communicate with each other T/F
5. The development of an artificial language will help other languages to develop T/F
6. Artificial languages can be used as a lingua franca for political reasons T/F
7. Many people in the world welcome English as an international language T/F
8. Not all people are in favour of choosing one modern language to become a

world one T/F

9. It would only be fair to choose the most used language to be a lingua franca T/F

10. Few people think that English influences the culture of their countries in a bad way T/F

11. If one language is chosen to become a lingua franca, people in different localities will easily understand each other T/F

12. The author of the article predicts that either British or American English will one day become a world language T/F

## **UNIT 2. LANGUAGES IN UKRAINE, GREAT BRITAIN AND THE USA**

**Task 1. Read and translate the following text.**

### **The Ukrainian Language**

According to the Constitution, Ukrainian is the state language of sovereign independent Ukraine. It is also spoken by Ukrainians living in other countries of the former Soviet Union and in Ukrainian diasporas in Canada, Australia, the USA, Great Britain and other countries of the world. Ukrainian is an independent and original unit of the Slavic branch of the Indo-European family of languages. Together with Russian and Byelorussian it forms the East Slavic group of languages. The history of the Ukrainian language embraces, on the one hand, the history of the phonetic, morphological and syntactical system of the spoken language in its various dialects, and, on the other hand, the history of the literary language. In the latter there have occurred great changes and breaks with tradition, brought about by circumstances in the cultural and political history of Ukraine. Consequently, the history of the literary language is divided into three periods:

1) the old period (10—12th centuries), when the basic literary language of Kievan Rus was Church Slavonic, to which popular elements were added slowly but regularly;

2) the middle period (14—18th centuries), when the so-called literary language of the 17th century was formed which was a mixture of different elements. Russian influence and pressure put an end to this development and led to its decline in the second half of the 18th century.

3) the modern period (19—20th centuries), when the literary language was reconstructed and based entirely on the popular language.

The fact that the literary Ukrainian language did not develop in urban centres and for the most part is based on the variety spoken in the countryside, has largely determined the peculiarities of its vocabulary which includes a lot of words and phraseological units describing village life and work, folklore, emotionally coloured elements, localisms, etc.



Under the Soviet power the linguistic policy for Ukraine was at first Russifying. Then from 1926 up to 1930, the so-called “Ukrainization” policy was introduced. At that time much was done in preparing and publishing new dictionaries, opening Ukrainian schools, theatres, cinemas and newspapers. But then the general policy was changed again, and “de-Ukrainization” began which lasted practically till the time of “perestroika”. During that period the majority of Ukrainian philologists and a number of writers and poets who fought for the rights of the Ukrainian language, found themselves in exile or in prison.

Now that Ukraine is independent, Ukrainian language, traditions and culture are experiencing their rebirth.

### **Task 2. Decide if the following statements are true or false**

1. Ukrainian language is spoken in Australia T/F
2. Ukrainian is an original unit of Indo-European family of languages T/F
3. Together with Russian and Byelorussian it forms the Western Slavic group of languages T/F
4. The history of literary language is divided into 2 periods T/F
5. The basic literary language of Kievan Rus was Church Slavonic T/F
6. Literary language of the 17th century was formed as a mixture of different elements T/F
7. During 19-20th centuries literary language was not reconstructed T/F
8. Literary Ukrainian language did not develop in urban centres T/F
9. Literary Ukrainian language includes a lot of words and phraseological units describing village life and work T/F
10. During 1926-1930 much was done in preparing and publishing new dictionaries T/F
11. During 1926-1930 the majority of Ukrainian philologists who fought for the rights of the Ukrainian language, found themselves in prison. T/F

### **Task 3. Read the text about English language and do activity after it**

#### **The English Language**

English belongs to the Teutonic or Germanic branch of the Indo-European family of languages. Three periods are usually recognised in its history:

Old English — from the time of the invasion of Britain by the Germanic tribes of the Angles, Saxons and Jutes in the 5—6th centuries, until the 9th century, after the Norman Conquest in 1066;

Middle English — from the middle of the 11th to the middle of the 15th centuries;

New English — from the middle of the 15th century to the present day. Besides, the last period is often subdivided into Early New English (1450—1700) and Modern English.

When the Anglo-Saxons came to Britain, they found the island inhabited by a people weaker in a military sense but more civilized than themselves because the Celts for some centuries had shared the civilization of the Roman Empire whose governors had ruled the country. So, Early English speech can be called a mixture of Celtic, Latin and German.

Other changes into the language were brought by two national disasters — the Danish and Norman Conquest. The Danes, who came first to rob Britain and then to settle there brought with them a distant relative of the Anglo-Saxon language which could even be understood without great difficulty. The Normans, however, interrupted the tradition of this language by destroying its literature and culture, and reducing it to the speech of uneducated peasants. English was no longer spoken by the nobility or taught at schools. French became the official language for centuries.

During the Middle and Modern English periods the English vocabulary has increased enormously as a result of borrowing from foreign languages. The revival of learning during the Renaissance gave a new impulse for borrowing new words from Latin. This period in the language development is called “the peaceful invasion”.

Britain’s growing position as a world power and the rapid development of America, resulted in the introduction into English of words from languages in every part of the globe.

Today we do not speak the language that was used by Chaucer or Shakespeare. We even don’t converse like Dickens or Jane Austin, because language is like a living organism — it is born, it lives and changes, and it may die if nobody speaks it any longer.

**Task 4. Fill in the blanks with one suitable word and find out some interesting information about English spelling. Bear in mind that more than one variant is sometimes possible**

### English Spelling

English spelling is unpredictable at the best of times, and occasionally totally chaotic – an opinion no doubt shared by British \_\_\_\_\_ and by foreigners who study English. However, studies of the \_\_\_\_\_ show that there are only about 400 \_\_\_\_\_ whose spelling is totally irregular. Unfortunately many of them are \_\_\_\_\_ the most frequently used in the language the first problem with \_\_\_\_\_ arose when the romans tried to write down Old English words \_\_\_\_\_ the 23 letter Latin alphabet. Old English at that time \_\_\_\_\_ nearly 40 vowels and consonants. Another problem came with the Norman \_\_\_\_\_ and the third with the introduction of the printing press in 1476 and emerging of a standard spelling system. The \_\_\_\_\_ reflected the speech of the London area. During the 15th \_\_\_\_\_ the pronunciation of vowels changed but because of the printing \_\_\_\_\_ the standard spelling system never caught up with the \_\_\_\_\_. There have been many attempts to reform the \_\_\_\_\_ spelling system but so far no changes have been made since the 16 th century, mainly \_\_\_\_\_ nobody can agree on what the best alternative may be!

**Task 5. All the sentences in the text are scrambled up. Arrange them in the correct order and find out interesting facts about other languages in Britain**

The languages of Wales, Scotland and Ireland

\_\_\_\_\_ 1 At the start of the 20th century half of the population of Wales were able to speak \_\_\_\_\_ speaking people have been getting smaller and smaller, and today only about a fifth of \_\_\_\_\_ islands of the Hebrides. It is interesting that the word “whisky” is taken from Gaelic \_\_\_\_\_ a language of Celtic origin, is still spoken by 70,000 people in Scotland, especially in the \_\_\_\_\_ century. Gaelic is also the language of the Irish people. It is still being taught both in \_\_\_\_\_ the population of Wales speak the language. Both the government and voluntary \_\_\_\_\_ and means “water of life”! People in the Lowlands of Scotland have for centuries \_\_\_\_\_ spoken Scots, a dialect derived from the Northumbrian branch of Old English and a \_\_\_\_\_ encouraged, and more radio and TV programmes in Welsh have appeared. Gaelic, also \_\_\_\_\_ completely separate language from Gaelic. This has its own recognised literary \_\_\_\_\_ tradition as in the poetry of Robert Burns and has seen a revival of poetry in the 20th \_\_\_\_\_ Welsh, a language belonging to the Celtic family. However, the numbers of Welsh- \_\_\_\_\_ Northern Ireland, where about 142,000 speak it, and the Republic of Ireland. \_\_\_\_\_ groups have taken steps to revive the use Welsh. Bilingual education in schools is.

**Task 6. Before reading the text try to match the beginnings of the following sentences with their completion given below.**

1. British English differs from American in...
2. Both American and English...
3. Words that have been absorbed into English tell much about...
4. Some differences in vocabulary between British and American English...
5. Many new words came into British English from...
6. Immigrants coming to live in America brought with them...
7. Native Indians made...
  - a. the world history
  - b. can lead to amusing situations
  - c. the former colonies of the British Empire
  - d. their own contribution into American English

- e. accent, grammar, spelling and vocabulary
- f. their own words which later assimilated into American English
- g. owe a lot to other languages in the world

**Task 7. Match the British English words given in the left-hand column with the American English words given in the right-hand column.**

1. car	a. pants
2. handbag	b. zipper
3. lift	c. movies
4. biscuit	d. cookie
5. trousers	e. candies
6. lorry	f. apartment
7. zip	g. automobile
8. pictures	h. purse
9. flat	i. elevator
10. sweets	j. truck
11. autumn	k. subway
12. bill	l. store
13. chemist's	m. freeway
14. crisps	n. can
15. shop	o. fall
16. petrol	p. check
17. pavement	q. chips
18. motor way	r. sidewalk
19. tin	s. drugstore
20. tube	t. gas

**Task 8. Sort out the following definitions of one and the same words according to their use in British and American English**

British English	American English
a.	b.

**Gas**

- a) something that you burn for heating and cooking
- b) something that you put in your car to make it go

**Bill**

- c) money which is made of paper
- d) a list of things that you have bought or eaten in a restaurant and the sum of money you have to pay

**Subway**

- e) a railway which runs under the surface
- f) a path which passes under a road

**Vest**

- g) clothing that you wear over your shirt and under your jacket
- h) clothes which you wear under your shirt

**Chips**

- i) long sticks of potato which you cook in deep oil and eat hot with a meal
- j) very thin slices of fried potato which you eat cold before a meal or as a snack

**UNIT 3. EDUCATION IN UKRAINE, GREAT BRITAIN AND THE USA**

**Task 1. Match the following English words with their Russian equivalents**

- |                               |                             |
|-------------------------------|-----------------------------|
| 1. playgroup                  | a. магистр                  |
| 2. nursery school             | b. аспирант                 |
| 3. preparatory school         | c. лекционная аудитория     |
| 4. headmaster/mistress        | d. детская игровая площадка |
| 5. deputy head                | e. начальная школа          |
| 6. school leaver              | f. директор школы           |
| 7. postgraduate               | g. детский сад              |
| 8. lecture theatre            | h. ясли                     |
| 9. Bachelor of Arts ( BA )    | i. подготовительная школа   |
| 10. Master of Science ( MSc ) | j. завуч                    |
| 11. primary school            | k. бакалавр                 |
| 12. playground                | l. выпускник                |

## **Task 2. Read and translate the text**

### **Education in Ukraine**

Present day independent Ukraine has a well-developed system of education which matches the standards of the developed countries. Pre-school education is not compulsory and is fee-paying. Most parents take their children to nursery schools or kindergartens at the age of 3. Up to the age of 5 children mostly eat, sleep and play there, but in senior groups they are taught the basics of arithmetic, reading, writing, arts and in some schools foreign languages.

Compulsory secondary education begins at the age of 6—7 and is free in state schools and fee-paying in private ones. Some schools, especially those with language slant, have preparatory classes. Secondary education includes three stages: primary (1st—3rd grades), basic (4—9th grades) and senior (10—11th grades). In regular secondary schools children start learning foreign languages from the 5th grade and have fewer lessons of language a week than specialised language schools that start teaching languages from the 1st grade. Recently new types of schools have appeared: gymnasiums and lycees. In addition, there are schools with technical, computer, mathematical, law, pedagogical and art slant. All the subjects in the secondary schools are obligatory but there are optional courses that students of senior grades can take in addition to the required ones.

Extra-curricular activities usually include a variety of sports and drama clubs, interest groups and various school parties. Those senior students who want to get qualification alongside the secondary education, can go to vocational training schools. Post-secondary education is provided by technical schools and colleges of 1<sup>st</sup> and 2<sup>nd</sup> Level of Accreditation that train young specialists in different trades.

Institutions of higher learning (higher educational establishments) include universities, academies, institutes and conservatories. They all hold entrance examinations to select the best applicants to be their students. Among the best known higher educational establishments there are Shevchenko Kyiv National University, Kyiv Polytechnic University, International Independent University “Kyiv-Mohyla Academy”, Kyiv State Conservatory, Lviv State University, Kharkiv National University, Kharkiv State Pedagogical University, Kharkiv State Polytechnic University and many others.

Post graduate education begins after the last year of studies and usually results in theses on the chosen scientific topic and the degree of the Candidate of Science. Doctorate Degree is awarded for an outstanding scientific research.

**Task 3. Think what you know about the system of education in Great Britain. Decide which of the words in the box can go in which section of the chart. You can put one word in more than one column:**

comprehensive school, headmaster/mistress, preparatory school, technical college, reception class, evening classes, nursery school, lecture theatre, public school,

postgraduate, kindergarden, deputy head, high school, polytechnic, playground, classroom, playgroup, professor, university, sixth form, graduate, doctorate, college, student, teacher, B.Sc, Ph.D., lecturer, tutor, MA, MSc

Pre-school Education	
Primary Education	
Secondary Education	
Further Education	
Higher education	
Adult Education	

#### **Task 4. Read and translate the following text**

##### **Education in Great Britain**

Children in Britain must attend school from the age of 5 (4 in Northern Ireland) until they are 16.

Before the start of formal schooling, many children attend nursery schools attached to primary schools. In addition some parents elect to send their children to private(fee-paying) nursery schools or kindergartens. In England and Wales, many primary schools also operate an early admission policy where they admit children under 5 into what are called reception classes.

Children first attend infants' schools or departments. At 7 they move to the junior school and the usual age for transfer from junior to secondary school is 11 (12 in Scotland). In some areas, however, "first" schools take pupils aged 5 to 8, 9 or 10, and pupils within the 8 to 14 age range go to middle schools.

The British educational system was changed in the 1960s. Previously, pupils in the state system either went to a grammar school or a secondary modern school at the age of eleven. To enter a grammar school, pupils had to pass a national exam ( the Eleven Plus ). Those who failed went to a secondary modern school. This two-school system and the Eleven Plus were abolished and replaced by comprehensive schools. These are intended for all pupils, whatever their abilities. They are state schools which is the general term for any school which is run by the government and where the parents do not have to pay. Over 85% of secondary school pupils go to comprehensive schools. However, 145 grammar schools in England didn't close down. They are very popular because they offer a good academic education for the 11 to 18 —year age group. Children enter grammar schools on the basis of their abilities, first sitting the "11" plus or entrance examination. In grammar schools there is usually a main school and a sixth form (the last one) which is run separately. Grammar schools cater for 4% of children in secondary education.

A small minority of children attend secondary modern schools (around 4%). These

schools provide a more general and technical education for children aged 11—16. City Technology Colleges (CTCs) aim to give boys and girls a broad secondary education with a strong technological and business slant. They are non-fee-paying independent schools, set up by the Government with the help of business sponsors who finance a large proportion of the initial capital costs and develop links with the schools. There are now 15 such colleges in operation in England and Wales. Specialist schools, which only operate in England, give pupils a broad secondary education with a strong emphasis on technology, languages, art and sports. There are over 250 specialist schools. They charge no fees and any secondary school can apply for specialist school status. The independent school sector is separate from the state educational system, and caters for 7% of all schoolchildren in England and 4% in Scotland. About 250 of the larger independent schools are known for historical reasons as public schools. They are very expensive private schools and in some cases fees can amount to several thousand pounds a year. Some students gain scholarships and their expenses are covered by the schools. These schools usually have good academic standards and are attended by pupils from an upper class or wealthy background. Famous ones include Eton and Harrow. Eton, which was founded in 1440, is said to have been the first “public school” because students could come to it from any part of England and not, as was generally the case, just from the immediate neighbourhood. Most public schools are boarding schools where the pupils live as well as study. In Northern Ireland there are a few fee-paying schools, and in Scotland “public schools” are supported by public funds and are not fee-paying and independent.

**Task 5. Remember what you know about education in the USA and match the following words and word-combinations with their Russian equivalents**

1. church-related schools	a.отдел народного образования
2. board of education	b.навыки общения
3. standards of requirements	c.прием в колледж
4. tuition fee	d.бесплатно
5. summer sport classes	e.оценки
6. social skills	f.плата за обучение
7. required subjects	g.остаться на второй год
8. admission to college	h.внешкольные мероприятия
9. extracurricular activities	i.обязательные предметы
10.grades	j.учебные материалы
11.teaching materials	k.нормы и требования
12.to repeat a course	l.религиозные школы
13.at no cost	m.летние занятия для отстающих



## **Task 6. Read the text and find out some new information about the system of education in the USA**

### **Education in the USA**

Americans have always shown a great concern for education. Here are some figures to support this! statement. Today, there are 43 million pupils and students in public schools at the elementary and secondary levels, and another 6 million in private schools throughout the country. In other words, 88% of American children attend public schools (financed by the government) and 12% go to private schools. Every year about 12 million Americans become students in over 3,000 colleges and universities of every I type: private, public, church-related, small and large, in cities, counties and states.

The United States does not have a national system of education. Education, Americans say, is “a national concern, a state responsibility and a local function”. It means that most educational matters are left to the separate states or the local community. In general, colleges, universities and schools,! whether state or private, are quite free to determine their own individual standards and requirements.

The major result of this unusual situation is that there is a lot of variety in elementary, secondary' and higher education throughout the nation. For example, although all states today require that children attend school until a certain age, it varies from 14 to 18 years. Or, as another example, in about 60% of the states, local schools are free to choose subjects and teaching materials or textbooks which they think are appropriate. In other states they only use the teaching materials approved by the state Board of Education. Some universities are free to residents of the state, others are expensive, especially for out- of-state students, with tuition fees of thousands of dollars each year. Some school systems are extremely conservative, some very progressive and liberal. These and other important differences must always be considered while describing American schools.

Because of the great variety of schools and colleges, and the many differences between them, we cannot speak about a typical American school or college. Yet, there are enough basic similarities in structure among the various schools and systems to give some general comments.

Most schools start at the kindergarten level at the age of 5. The elementary school (or grade school) goes from age 6 to 11 or 12 (grades1to 5 or 6). This is usually followed by a middle school (grades 6 – 8) or Junior High School (grades 7—9). High schools include 3 or 4 years, usually until the age of 18 (unless a student “drops out” and doesn’t graduate, that is earn a high school diploma). There are almost always required subjects and sometimes students at more advanced levels can choose some subjects. Pupils who do not do well often have to repeat courses or attend summer support classes which are also called “make up” or remedial classes.

Like schools in Britain and other English-speaking countries, those in US have always stressed “character” or “social skills” through extra-curricular activities, including sports. Most schools publish their newspapers, have student orchestras and

choirs, theater and drama groups and clubs. Many sports are available to students at no cost, and many schools have swimming pools, tennis courts and stadiums.

But those who believe that American schools are more fun than work overlook an important fact: a high school diploma is not a ticket that allows someone to automatically enter a university. Standardized examinations play a decisive role in the admission to most colleges and universities. Students who wish to go to a good university have to work hard. During studies any student can be asked to leave because of poor grades. As tuition fees are rather high at most colleges and universities, students who must work at outside jobs as well as study are the rule rather than the exception.

**The following diagram gives a rough idea of the Unites States Educational structure.**

<b>Type of education</b>	<b>Grade</b>	<b>Age</b>
Nursery school/pre-school		3 – 4
Kindergarten		3 – 5
Primary school	1 <sup>st</sup> – 3 <sup>rd</sup>	6 – 8
Elementary or primary school	1 <sup>st</sup> – 4 <sup>th</sup>	6 – 9
Middle school or Junior High School	5 – 8 <sup>th</sup>	10 – 14
Combined Junior – Senior High School	7 – 12 <sup>th</sup>	12 – 18
4 year High School	9 – 12 <sup>th</sup>	14 – 18
Senior High School	9 – 12 <sup>th</sup>	14 – 18
Junior or community college		
College or University to BA degree		
College or University Graduate School To MA/Ms or PhD		

### **Task 7. Decide if the following statements are true or false**

1. The USA like many other countries has a national system of education T/F
2. More American children study in private schools than in public schools T/F
3. American children must attend school until a certain age T/F
4. It would be difficult to describe a “typical” American school because there are many differences from place to place T/F
5. All US schools teach the same subjects and use the same subjects and use only the materials approved by the state board of education T/F

6. All American universities are very expensive T/F
7. Students in Junior and Senior classes can study some subjects of their choice T/F
8. College students with poor grades have to repeat the course T/F
9. Sports and extra-curricular activities are important school subjects and they develop “social skills” T/F
10. Many US students enjoy sports activities free of charge T/F

## UNIT 4. COMPUTERS

**KEYWORDS:** digital, hardware, software, console/system unit, key-board, disk-drive, connection, mainframe computer, operating system, word processing, spreadsheet, data, database, graphics, manual, key in/type in, network, intranet, compatible, hard disk, utilization, simultaneously, breakthrough, facilitate, uptake, access.

### 1. Pre-reading activity

*In pairs, discuss these questions.*

1. Have you got a computer at home, school or work? What kind is it?
2. How often do you use it? What do you use it for?
3. How were computers used in your school?
4. How do you think computers will be used in school in the future?

### 2. Read and translate the text

#### Computers

Nowadays, we cannot imagine our life without computers and the fact is that they have become so important that nothing can replace them. They seem to be everywhere today. Since 1948 when the first real computer was invented our life has changed so much that we can call it real *digital* revolution.

Computer *hardware* consists of a *console (system unit)*, a *key-board*, a *disk-drive*, a printer, a monitor, a mouse and their *connections*. The *software* consists of different programs you run on your computer. The most common programs used in business are those for *word processing* (writing letters, faxes, documents, contracts), *spread sheets* (for budget and financial analysis), *database* management programs (for keeping names and addresses of customers), accounting (for bookkeeping), *graphics* programs (for drawing charts), communications programs (for electronic mail, Internet), desktop publishing programs (for producing *manuals*, catalogues). The operator *keys in (types in)* the information which can be saved and retrieved at a later date.

Most businesses nowadays use personal computers or PCs, which are often linked together in a local *network (intranet)*. This is a big change from the days when time had to be rented on *mainframe computer*. Nowadays these are only used by very large businesses, universities, or government departments.

The two most popular types of computers currently are those of IBM and Apple (the Macintosh). It was IBM who set the standard for the PC which others later imitated. That is why, in order to be able to use the widest range of software, a computer has to be IBM *compatible*.

The most successful software company now is Microsoft with its Windows *operating system*. The Microsoft Corporation is constantly developing the new versions of its operating system as well as other products.

The computer manufacturers try to apply the newest technologies producing hardware systems with the fastest processors like: Pentium IV, Celeron, Athlon, Duron and others. It is true that these newer models have a faster processor, more memory, a larger *hard disk* drive and a faster CD-ROM drive than previous models.

We are becoming increasingly dependent on computers. They are used in business, hospitals, crime detection and even to fly planes. What things will they be used for in future? Is this dependence on computers a good thing or should we be more suspicious of their benefits?

For the last two decades cybernetics have experienced a major *breakthrough*. This led to the *utilization* of computers at nearly all parts of our daily life, from personal computers to complicated surgery performing. Surely the *uptake* of this technology *facilitates* a lot of difficult tasks. Computers can perform many complex operations *simultaneously* and scientist practically can't do without them. Thanks to them people have *access* to enormous amount of information. Gathering *data* has never been simpler than now. They are not only used in laboratories but also in factories to control production. Sometimes it is computers that manufacture other computers.

Most of the daily tasks and individual experiences are time and effort consuming. These two fundamental qualities could be tremendously saved by the use of computers.

### **3. Answer the questions to the text:**

1. What are the basic parts of a computer?
2. What are computers used for?
3. Why are all computers IBM compatible?
4. What features differ new models of computers from computers of the past?
5. Where has a breakthrough in cybernetics led to?
6. What area of life can we use computers?

### **4. Find out whether the statements given below are true (T) or false (F) according to the information in the text. If the statements are false, correct them.**

1. There are a lot of types of apparatus that can replace computers. ( )
2. Programs for word processing and database management are especially important in business. ( )

3. It was Apple (Macintosh) who set the standard for the PC which others companies later imitated. ( )
4. Gathering data has always been a rather simple process. ( )
5. The use of computers can save both time and effort consuming. ( )

**5. Complete the sentence below with the best answer (A, B or C) according to the information in the text.**

1. Organizations exist to achieve some particular purpose ...
  - A. ... but sometimes it's difficult to define it.
  - B. ... and both employees and managers define it.
  - C. ... and managers are those who define that purpose and the means for its achievement.
2. As managers engage in planning, they ...
  - A. ... arrange and structure work to accomplish the organization's goals.
  - B. ... deal in any way with employee behavior issues.
  - C. ... set goals, establish strategies for achieving those goals, and develop plans to integrate and coordinate activities.
3. The final management function is controlling that is ...
  - A. ... the process of monitoring, comparing, and correcting the work of subordinates.
  - B. ... the process of motivating subordinates and selecting the most effective communication channel
  - C. ... the process of determining what tasks are to be done.

**6. Match nouns and adjectives and their definitions**

1	software	A	information in a form that can be stored and used, especially on a computer
2	hardware	B	an important new discovery in something you are studying, especially one made after trying for a long time
3	data	C	a set of instructions (programs) which tells the computer what to do
4	breakthrough	D	able to be used together, especially when they are made by different companies (about pieces of computer equipment)
5	compatible	E	any electronic or mechanical part of a computer
6	access	F	a book that gives instructions about how to do something, especially how to use a machine
7	facilitate	G	to make it easier for a process or activity to happen
8	manual	H	to find information, especially on a computer; the right to enter a place, use something, see someone etc.

1-... 2-... 3-... 4-... 5-... 6-... 7-... 8-...

**7. Translate sentences. Pay attention to the use of the key words.**

1. She loaded the new software.
2. The company has spent millions of dollars replacing outdated computer hardware.
3. All the data shows that these animals are more adaptable than we thought.
4. The instruction manuals that accompany new computer software are often difficult to understand.
5. This was an important breakthrough that had an enormous impact on the scientific community.
6. Unfortunately he bought a printer that was not compatible with his computer.
7. Most workplaces have a local network as well as access to the Internet.
8. Consult the computer manual if you have a problem.
9. Some experts foresee a future in which nobody would buy a spreadsheet program or word processor.
10. Computers can be used to facilitate language learning.

**UNIT 5. THE INTERNET, THE WEB AND GLOBAL ELECTRONIC COMMERCE**

**KEYWORDS:** network, infrastructure, exchange, variety, medium, link, disseminate, commerce, commercial, transaction, transmission, handling, transfer, inventory, implication, security, govern, copyright, protect, collection, impact.

**1. In pairs, discuss these questions.**

1. How would you define *the Internet*? Make a list of all the things you can use the Internet for.
2. What is your favourite search engine to find information on the Web? Why?
3. Do you download music or video clips from the Web? Do you pay for them?
4. Do you buy things online? Is it better to buy online than to go to a shop?
5. Do you use the Web to do school/university assignments or projects? How?

**2. Read and translate the text 1**

**The difference between the Internet and World Wide Web**

The internet has become a cultural, economical and life changing technological phenomenon. Enough can not be said about this incredible technology. However, the internet is not one single invention; it is a simple idea that has evolved throughout the

decades into something bigger than us all. While the internet was started fairly recently, today we are still at the top of the iceberg of what this technology in all its many forms can help us achieve. So in essence the internet has already and will continue to revolutionize the world.

Many people use the terms Internet and World Wide Web (the Web) interchangeably, but in fact the two terms are not synonymous. The Internet and the Web are two separate but related things.

#### *What is The Internet?*

The Internet is a massive network of networks, a networking infrastructure. More than 100 countries are linked into exchanges of data, news and opinions. Unlike online services, which are centrally controlled, the Internet is decentralized by design. Each Internet computer, called a host, is independent. It can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of languages known as protocols.

#### *What is The Web (World Wide Web)?*

The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet. It is a system of Internet servers that support specially formatted documents. The documents are formatted in a markup language called HTML (HyperText Markup Language) that supports links to other documents, as well as graphics, audio, and video files. This means you can jump from one document to another simply by clicking on hot spots. The Web also utilizes browsers, such as Internet Explorer or Firefox, to access Web documents called Web pages that are linked to each other via hyperlinks.

The Web is just one of the ways that information can be disseminated over the Internet. The Internet, not the Web, is also used for e-mail. So the Web is just a portion of the Internet, though a large portion, but the two terms are not synonymous and should not be confused.

### **3. Answer the questions to the text:**

1. Is the Internet one single invention?
2. What is the Internet?
3. What are protocols of the Internet?
4. What is the Web?
5. What language is used for documents in the Web?
6. What is the difference between the Internet and World Wide Web?

### **4. Find out whether the statements given below are true (T) or false (F) according to the information in the text. If the statements are false, correct them.**

1. The Internet is the idea that emerged several decades ago and has changed the world. ( )
2. The terms Internet and World Wide Web mean the same. ( )

3. The Internet is anarchy by design. ( )
4. The Web is used for e-mail. ( )
5. Different computer languages are used for graphics, audio, and video files in the Web. ( )

## **5. Read and translate the text**

### **Global Electronic Commerce**

Electronic commerce refers to commercial transactions which are based on the electronic storage, processing and transmission of data over communications networks such as the Internet and the World Wide Web. Global electronic commerce has been made possible by rapid advances in technology. Digital technologies permit the storage and processing of vast amounts of information. Satellites and optical fibres have dramatically quickened the handling and distribution of this information.

Electronic commerce offers the possibility of 'trade without borders'. In practice there is evidence that information and communications technologies may polarise the world economy into 'online' and 'offline' segments, what is sometimes referred to as the digital divide. In fact, with email, VOIP (voice over internet protocol), cloud computing, online banking and other services, it is easier and more convenient than ever to do business. In fact, many of the physical barriers of conducting business have been erased.

Enough can't be said about the economic impact that the internet has brought to the world.

Although electronic transfers of money have been a feature of the international economy for decades, used by banks, credit card agencies, stock brokers and so on, the 'electronic marketplace' which deals with products and services is something new. Perhaps trillions of dollars have been created in wealth from the internet and billions of lives have been changed due to e-commerce.

#### **Commercial security**

Business-to-business transactions dominate electronic commerce. About 80 per cent of the electronic trade in products and services is represented by business-to-business transactions, which is the fastest-growing area of electronic communication.

Multinational enterprises use electronic commerce as the basis of their global networks. Companies providing professional services in insurance, finance, engineering, design and architecture, for example, use the internet to sell their services to other businesses. Physical barriers between countries and markets are meaningless in this context.

Economists can readily appreciate the cost savings likely to be associated with business-to-business electronic commerce – the impact on inventories, for example – as firms find it less and less necessary to carry stocks. But again there is a downside. Electronic commerce has implications for commercial security. When firms engage in electronic commerce, they open up their electronic systems to suppliers and



customers. This can cover such things as websites, customer software, search engines, manufacturing processes, and so on.

Business-to-business electronic commerce which takes place across national boundaries has highlighted differences between the laws governing such data in different countries. The international law protecting data, patents, copyrights, trade secrets and so on only provides protection at the minimum level. Firms tend to rely on much stronger national laws to protect their interests. But electronic commerce throws up all sorts of anomalies. What appears at first sight to economists to be straightforward and highly efficient 'trade without borders' turns out to be no such thing. One example relates to data collections. In the US a collection of data – for example, a list of names and addresses – cannot be protected under copyright law unless it has enough 'creativity' to qualify as intellectual property.

But in the EU data as simple as a list of names and addresses is protected. All kinds of issues are affected by these anomalies. They impact on the relationship between multinational companies and their local suppliers, as well as between companies and their competitors.

#### **6. Answer the questions to the text:**

1. What is electronic commerce based on?
2. What gains in technology have been critical for the development of e-commerce?
3. What is the main 'idea' of e-commerce?
4. What new marketplace appeared with the development of the Internet?
5. What is the fastest-growing area of electronic communication?
6. Why do economists speak about cost savings of e-commerce?
7. Why do firms prefer to rely on national laws in their work?

#### **7. Complete the sentence below with the best answer (A, B or C) according to the information in the text.**

1. Polarization of the world economy into 'online' and 'offline' segments ...
  - D. ... is the result of electronic transfers of money.
  - E. ... is the result of advances in information and communications technologies.
  - F. ... is the result of physical barriers between states.
2. Multinational enterprises use electronic commerce ...
  - G. ... to sell goods.
  - H. ... as a stylish feature of their image.
  - I. ... as the basis of their global networks.
3. International laws ...
  - J. ... protect firms dealing with electronic commerce at minimum level.
  - K. ... provide strong protection to business-to-business electronic commerce.
  - L. ... are the basis for successful 'trade without borders'.

**8. Match nouns and adjectives and their definitions.**

1 copyright	A a business deal or action, such as buying or selling something
2 transaction	B protection from bad things that could happen to you
3 inventory	C 1) a list of all the things in a place 2) <i>AmE</i> all the goods in a shop
4 security	D the legal right to be the only producer or seller of a book, play, film, or record for a specific length of time
5 infrastructure	E 1) a system of lines, tubes, wires, roads etc that cross each other and are connected to each other 2) a set of computers that are connected to each other so that they can share information
6 network	F the act of giving someone something and receiving something else from them
7 link	G the basic systems and structures that a country or organization needs in order to work properly,
8 exchange	H a relationship or connection between two or more people, countries, organizations etc

1-... 2-... 3-... 4-... 5-... 6-... 7-... 8-...

**9. Translate sentences. Pay attention to the use of the key words.**

1. The database will be protected by copyright.
2. The bank charges a fixed rate for each transaction.
3. We made an inventory of everything in the apartment.
4. This insurance plan offers your family financial security in the event of your death.
5. The government plans to invest \$65 billion in education, health care and infrastructure.
6. To provide equal access to oil products for stable prices a network of about 500 fuel stations will be established in the whole territory before 2010.
7. The company has strong links with big investors.
8. I've offered to paint the kitchen in exchange for a week's accommodation.

**Word Families**

Verb	secure	Redgrave won his third Olympic gold medal, and secured his place in history.
Noun	security	This insurance plan offers your family financial security in the event of your death.
Adjective	secure	It was enough money to make us feel financially secure.

Verb	protect	Physical exercise can protect you against heart disease.
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Noun	protection	For your own protection, you should have a warranty that provides for a replacement product
Noun	protector	You are my great and good friend and financial protector.
Adjective	protective	Sunscreen provides a protective layer against the sun's harmful rays.

Verb	govern	The universe is governed by the laws of physics.
Noun	government	Structural reforms are unlikely under the present government.
Noun	governor	In federations, a governor may be the title of each appointed or elected politician who governs a constituent state.
Adjective	governing	Newton gave three laws governing the behaviour of material objects.
Adjective	governmental	They made an attempt to restrict governmental power

Noun	commerce	In this chapter we discuss the major protocols of e-commerce and how hackers attempt to alter them for their own gain.
Adjective	commercial	Our top priorities must be profit and commercial growth.

# 10. Chose the word that best completes the sentence.

- Unemployment insurance means that you are partially \_\_\_\_\_ if you lose your job.
  - protector
  - protected
  - protective
  - protection
- Companies can offer \_\_\_\_\_ credit card transactions over the internet.
  - secure (v)
  - secure (adj)
  - security
- All infrastructure will be owned and \_\_\_\_\_ by users and will be operated on a for-profit basis.
  - government
  - governing
  - governed
  - governor
- Today \_\_\_\_\_ includes a complex system of companies that try to maximize their profits by offering products and services to the market at the lowest production cost.

- a) commercial
- b) commerce

### Language work: the prefixes e- and cyber-.

The **e-** prefix means **electronic**, and we add it to activities that take place on computers or online, for example

**e-business/e-commerce** – business conducted over the Internet. Other examples include: **e-card, e-learning, e-voting, e-signature, e-assessment, e-cash, e-zine, e-book, e-money.**

There are often spelling variations, with or without a hyphen, so always check your dictionary.

The **cyber-** prefix comes from cybernetics, and we use it to describe things related to computer networks, e.g. **cybercafé** – an internet café. Other example include: **cybercrime, cyberculture, cyberslacker and cyberspace.**

### 11. Complete the following sentences.

1. A \_\_\_\_\_ is an employee who uses his company's internet connection during work hours to chat with friends, play games. Etc.
2. An \_\_\_\_\_ is a post card sent via the Internet.
3. An \_\_\_\_\_ is a small magazine or newsletter published online.
4. In a \_\_\_\_\_ you can use computers with internet access for a fee.
5. Examples of \_\_\_\_\_ include internet fraud, digital piracy, theft of confidential information, etc.
6. In the future, all elections will be carried out using \_\_\_\_\_.
7. You can now sign legal documents online using \_\_\_\_\_.
8. \_\_\_\_\_ will revolutionize the way we take exams.
9. \_\_\_\_\_ can be used on some websites instead of real money to make purchases. It reduces the risk of fraud.
10. An \_\_\_\_\_ is like the paper version, but in digital form.

### 12. Read the following passage and fill the blanks with the words given below.

disks	popular	revolutionized	software
facilitates	processing	sharply	storage
networks	replacements	skills	technical

Almost all businesses today, no matter what their size, rely on computers for many of their needs. Prices of computers have declined (1) \_\_\_\_\_ over the years, resulting in their increased use in the office. Most offices now have (2) \_\_\_\_\_ of computers, which are all electronically linked together. This (3) \_\_\_\_\_ sharing and processing of data. Indeed, data (4) \_\_\_\_\_ would not be possible without the technical wizardry of hardware manufacturers.

Data storage (5) \_\_\_\_\_ are a technological miracle. Because of (6) \_\_\_\_\_ advancements, you never need to worry about where to store your data. The (7) capacity of a small disk is incredible. Manufacturers of (8) \_\_\_\_\_ provide frequent upgrades. Unfortunately, these upgrades are often not compatible with earlier versions or other software. This means that you may have to find (9) \_\_\_\_\_ for your favourite programs.

Administrators today are trained in the most (10) \_\_\_\_\_ software programs. Highly skilled computer programmers and engineers are also very much in demand, especially when a computer or network causes problems.

Computers have (11) \_\_\_\_\_ the workplace, and everyone, no matter how accomplished he or she is in other (12) \_\_\_\_\_, needs to know how to use a computer for basic tasks, such as using electronic mail, searching the Internet for information, and writing a letter.

### 13. Read the text and answer these questions.

- 1 Why is security so important on the Internet?
- 2 What security features are offered by Mozilla Firefox?
- 3 What security protocol is used by banks to make online transactions secure?
- 4 How can we protect our email and keep it private?
- 5 What methods are used by companies to make internal networks secure?
- 6 In what ways can a virus enter a computer system?
- 7 How does a worm spread itself?

## Security and Privacy on the Internet

There are many benefits from an open system like the Internet, but one of the risks is that we are often exposed to **hackers**, who break into computer systems just for fun, to steal information, or to spread viruses. So how do we go about making our online transactions secure?

### Security on the Web

Security is a crucial when you send confidential information online. Consider, for example, the process of buying a book on the Web. You have to type your credit card number into an order form which passes from computer to computer on its way to the online bookstore. If one of the intermediary computers is infiltrated by hackers, your data can be copied.

To avoid risks, you should set all security alerts to high on your Web browser. Mozilla Firefox displays a lock when the website is secure and allows you to disable or delete **cookies** – small files placed on your hard drive by web servers so that they can recognize your PC when you return to their site.

If you use online banking services, make sure they use **digital certificates** – files that are like digital identification cards and that identify users and web servers.

Also be sure to use a browser that is compliant with **SSL (Secure Sockets Layer)**, a protocol which provides secure transactions.

### **Email privacy**

Similarly, as your email travels across the Net, it is copied temporarily onto many computers in between. This means that it can be read by people who illegally enter computer systems.

The only way to protect a message is to put it in a sort of virtual envelope – that is, to encode it with some form of **encryption**. A system designed to send email privately is Pretty Good Privacy, a **freeware** program written by Phil Zimmerman.

### **Network security**

Private networks can be attacked by intruders who attempt to obtain information such as Social Security numbers, bank accounts or research and business reports. To protect crucial data, companies hire security consultants who analyze the risks and provide solutions. The most common methods of protection are **passwords** for access control, **firewalls**, and **encryption** and **decryption** systems. Encryption changes data into a secret code so that only someone with a key can read it. Decryption converts encrypted data back into its original form.

### **Malware protection**

**Malware** (malicious software) are programs designed to infiltrate or damage your computer, for example **viruses**, **worms**, **Trojans** and **spyware**. A virus can enter a PC via a disk drive – if you insert an infected disc – or via the Internet. A worm is a self-copying program that spreads through email attachments; it replicates itself and sends a copy to everyone in an address book. A Trojan horse is disguised as a useful program; it may affect data security. Spyware collects information from your PC without your consent. Most spyware and adware (software that allows pop-ups – that is, advertisements that suddenly appear on your screen) is included with ‘free downloads’.

If you want to protect your PC, don’t open email attachments from strangers and take care when downloading files from the Web. Remember to update your **anti-virus software** as often as possible, since new viruses are being created all the time.

## **14. Fill in the gaps with the words in a bold type from the text.**

- 1 Users have to enter a \_\_\_\_\_ to gain access to a network.
- 2 A \_\_\_\_\_ protects a company intranet from outside attacks.
- 3 A \_\_\_\_\_ is a person who uses his computer skills to enter computers and networks illegally.
- 4 \_\_\_\_\_ can infect your files and corrupt your hard drive.
- 5 You can download \_\_\_\_\_ from the Net; this type of software is available free of charge but protected by copyright.
- 6 Encoding data so that unauthorized users can’t read it is known as \_\_\_\_\_.
- 7 This company uses \_\_\_\_\_ techniques to decode secret data.
- 8 Most \_\_\_\_\_ is designed to obtain personal information without the user’s permission.

## **SUPPLEMENTARY TEXTS FOR READING**

Schooling is compulsory for twelve years, for all children aged five to sixteen. There are voluntary years of schooling (nurseries). The primary cycle lasts from five to eleven. In primary schools the first two years are spent on informal development of expression and ability to concentrate.

The approach to education has changed in the past thirty years. It is now widely accepted that it is not enough for children simply to absorb and remember information. They should be equipped to evaluate and criticise the information they receive, and to find out things for themselves. The content of education should be practicable and relevant to real life. Children are encouraged to undertake projects on their own account, often in pairs or in groups.

Outside the academic curriculum there is a great concern with the development of the child's personality. Clubs are encouraged for the joint pursuit of interests in nature, such as bird-watching, or music, dancing or drama. There is also a pastoral system, through which each teacher meets an assigned group of twenty or thirty pupils regularly to discuss problems of the world in general, and gives advice on choice of courses and, if necessary, on personal problems.

The academic year begins in September, after the summer holidays. It is divided into three terms, with the intervals between them formed by the Christmas and Easter holidays. The exact days of the holidays vary from area to area, being in general about two weeks at Christmas and Easter. In addition, there is normally a week holiday in the middle of each term, and five weeks in the summer.

Schools mostly work Mondays to Fridays only, from about 9 a.m. to between 3 and 4 p.m. Lunch is provided and parents pay most of the cost unless their income is low enough to entitle them to free children's meals.

The public examinations are set on completion of the compulsory cycle of education at the age of 16, and on completion of the two voluntary years.

General Certificate of Secondary Education (GCSE) is the name of the examination taken by school pupils at the end of their fifth year of secondary education, at the age of 16. It is also open to anyone who has studied for it. The examination was introduced in 1989. Pupils take an average of seven GCSE's in a variety of subjects. Grades go from A to G, and pupils can fail completely.

During the two voluntary years of schooling, pupils specialise in two or three subjects and take the GCSE Advanced Level (or A-Level) examinations, usually with a view to entry to a university, politechnic or other colleges of higher education. To enter most types of higher education, a student must usually have three 'A' levels with good grades.

### **Types of Secondary Schools**

Children may attend either state-funded or fee-paying independent schools.

About 90 per cent of children receive their secondary education at comprehensive schools. Comprehensive schools were introduced in 1965 to provide an equal secondary education for all pupils, regardless of ability.

Public schools are the most exclusive schools in the country. The most famous are Eton and Harrow for boys, and Roedean and Benenden for girls. They are often hundreds of years old, but became important in the 19th century to provide rulers and administrators for the British Empire.

Eton is Britain's most famous public, or 'independent' school. It was founded in 1440 by King Edward VI for poor scholars, but quickly became the school for sons of the nobility and the very rich. There are 1.260 boys aged 12-18. Fees are currently 8,500 a year and extra costs for uniforms and equipment are very high. Entrance to Eton is now through merit, and the school says it will not accept a boy because of his family name if he does not have the right qualifications. However, the education at Eton will give a boy a lifetime of connections to the most powerful people in British society.

### **Higher Education**

Only about one-third of school-leavers receive post-school education in Great Britain, compared with over 80 per cent in Germany, France, the United States and Japan.

Candidates are accepted on the basis of their A-level results. The course of study lasts for 3 or 4 years (medical courses last for 5 years).

Students take university examinations for Bachelor of Arts, or of Science (BA or BS) on completing the undergraduate course, and Master of Arts or of Science (MA or MS) on completing postgraduate work, which is usually a one- or two-year course involving some original research. Some students continue to complete a three- year period of original research for the degree of Doctor of Philosophy (PhD).

Today there are 47 universities in Britain, compared with only 17 in 1947. They fall into four broad categories: the ancient English universities, the ancient Scottish universities, the 'red-brick' universities and the 'plate-glass' universities. They are all private institutions, receiving direct grants from the central government.

Oxford and Cambridge, founded in the 13th and 14th centuries, are two oldest and most exclusive universities in the country. 'Oxbridge' is an adjective made from the words 'Oxford' and 'Cambridge' to describe the type of the people who go there, usually the most influential people in the country. Today, 'Oxbridge' educate less than one-tenth of Britain's total university student population. But they continue to attract many of the best brains, partly on account of their prestige and partly on account of the beauty of their buildings. Both universities grew gradually, as federations of independent colleges most of which were founded in the 14th, 15th and 16th centuries. In both universities, however, new colleges were established, for example, Green College Oxford (1979) and Robinson College Cambridge (1977).

Scotland has four ancient universities: Glasgow, Edinburgh, St. Andrews and Aberdeen, all founded in the 15th and 16th centuries. Those universities were created with strong links with the ancient undergraduate courses, compared with the usual three-year courses in England and Wales.

In the 19th century many more 'red-brick' universities were established to respond to the greatly increased demand for educated people as a result of the Industrial



Revolution and the expansion of the British Empire. Many of these universities were sited in the industrial centres, for example, Birmingham, Nottingham, Newcastle, Liverpool and Bristol.

With the expansion of higher education in the 1960s, many more plate-glass universities were established. They were named after counties or regions rather than old cities, for example, Sussex, Kent, East Anglia.

As with the school system so also with the higher education, there is a real problem about the exclusivity of Britain's two oldest universities. Although now open to all according to intellectual ability, Oxbridge retains its exclusive and narrow character. Together with the public school system, it creates a narrow social and intellectual channel from which the nation's leaders are almost exclusively drawn.

The Open University is highly successful. It was devised to satisfy the needs of working people of any age who wish to study in their spare time for degrees. The University conducts learning through correspondence, radio and television, and also through local study centres. Most course work is run by part-time tutors (many of whom are lecturers at other universities), they meet students to discuss their work at regular intervals. There are short, residential summer courses. The students are of all ages, some of them retired. They may spread their studies over several years, and choose their courses to suit their individual needs and interests. The Open University has helped greatly towards the idea of education accessible to everyone who aspires to it. '

### **Information Technology (IT)**

Information technology (IT) is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications. The term in its modern sense first appeared in a 1958 article published in the Harvard Business Review, in which authors Leavitt and Whistler commented that "the new technology does not yet have a single established name. We shall call it information technology (IT).

IT is the area of managing technology and spans wide variety of areas that include but are not limited to things such as processes, computer software, information systems, computer hardware, programming languages, and data constructs. In short, anything that renders data, information or perceived knowledge in any visual format whatsoever, via any multimedia distribution mechanism, is considered part of the domain space known as Information Technology (IT). IT provides businesses with four sets of core services to help execute the business strategy. These four core services are broken into business process automation, providing information, connecting with customers, and productivity tools.

IT professionals perform a variety of functions (IT Disciplines/Competencies) that ranges from installing applications to designing complex computer networks and information databases. A few of the duties that IT professionals perform may include data management, networking, engineering computer hardware, database and software design, as well as management and administration of entire systems.

Information technology is starting to spread further than the conventional personal computer and network technologies, and more into integrations of other technologies such as the use of cell phones, televisions, automobiles, and more, which is increasing the demand for such jobs.

In the recent past, the Accreditation Board for Engineering and Technology and the Association for Computing Machinery have collaborated to form accreditation and curriculum standards for degrees in Information Technology as a distinct field of study as compared to Computer Science and Information Systems today. SIGITE (Special Interest Group for IT Education) is the ACM working group for defining these standards. The Worldwide IT services revenue totaled \$763 billion in 2009.

### **Silicon Valley**

Silicon Valley is in the southern part of the San Francisco Bay Area in Northern California in the United States. The region is home to many of the world's largest technology corporations. The term originally referred to the region's large number of silicon chip innovators and manufacturers, but eventually came to refer to all the high-tech businesses in the area; it is now generally used as a metonym for the American high-tech sector. Despite the development of other high-tech economic centers throughout the United States and the world, Silicon Valley continues to be the leading hub for high-tech innovation and development, accounting for 1/3 of all of the venture capital investment in the United States.

Geographically, the Silicon Valley encompasses all of the Santa Clara Valley including the city of San Jose (and adjacent communities), the southern Peninsula, and the southern East Bay.

Since the early twentieth century, Silicon Valley has been home to an electronics industry. The industry began through experimentation and innovation in the fields of radio, television, and military electronics. Stanford University, its affiliates, and graduates have played a major role in the development of this area.

A powerful sense of regional solidarity accompanied the rise of Silicon Valley. From the 1890s, Stanford University's leaders saw its mission as service to the West and shaped the school accordingly. At the same time, the perceived exploitation of the West at the hands of eastern interests fueled booster-like attempts to build self-sufficient indigenous local industry. Thus, regionalism helped align Stanford's interests with those of the area's high-tech firms for the first fifty years of Silicon Valley's development.

During the 1940s and 1950s, Frederick Terman, as Stanford's dean of engineering and provost, encouraged faculty and graduates to start their own companies. He is credited with nurturing Hewlett-Packard, Varian Associates, and other high-tech firms, until what would become Silicon Valley grew up around the Stanford campus. Terman is often called "the father of Silicon Valley."

During 1955-85, solid state technology research and development at Stanford University followed three waves of industrial innovation made possible by support from private corporations, mainly Bell Telephone Laboratories, Shockley Semiconductor, Fairchild Semiconductor, and Xerox PARC. In 1969 the Stanford Research Institute operated one of the four original nodes that comprised ARPANET, predecessor to the Internet.

### **Modern Means of Communication and Electronic Commerce**

Connecting many computer **networks** and using common addressing system, the **Internet** has been growing rapidly since its creation in 1983, radio, telephone and cable television wires, and satellites being used to deliver Internet services. By the mid-1990s the Internet linked millions of computers throughout the world and it is sure to be most important commercial and popular means of communication nowadays. Having expanded considerably during the 1990s, the **World Wide Web** enables users easily to examine the internet **sites** and now it is likely to have become the leading informational service of the Internet.

Since the mid-1990s **electronic commerce** has become one of the most rapidly growing retail sectors involving the use of computer telecommunication **networks** for maintaining business relationships and selling information, services and commodities. Although **e-commerce** usually **refers** only to the trading of goods and services over the Internet, it actually includes broader economic activity such as business-to-consumer and business-to-business commerce as well as internal organizational transactions that support these activities.

A large part of **e-commerce** was transferred to the Internet after the first graphical “**browser**” **software** for the access to the **World Wide Web** had been introduced in 1993 and when the number of companies and individuals using “**on-line**” had greatly increased. In some fields new **Internet** retailers seem to have grown up overnight and begun successfully competing with traditional retailers. Most of recently established companies are known to include the **electronic commerce** in their business as well.

The further development of secure electronic transfer of sensitive information, such as credit card numbers and electronic funds transfer orders, is certainly to be essential to the continued growth of **e-commerce**. It is often necessary to ensure the **encrypting** of Web purchase forms, many individuals also usually **encrypting** their **e-mail**.

Among other innovations that have contributed to the growth of **e-commerce** are electronic **directories** and search systems for finding information on the Web; **software** agents that act autonomously to allocate goods and services; and special identifying services over the Internet. These intermediary services **facilitate** the sale of goods (actually delivering the goods in the case of information), the rendering of services such as banking, ticket reservations, and stock market transactions, and even the delivery of **remote** education and entertainment. Specialists consider electronic

auction sales and markets to be other rapidly developing parts of **e-commerce**. The former offer a large variety of goods from computers and electronics to books, recordings, automobiles and real estate, while the latter allow a buyer to choose offers from many sellers.

Businesses often develop private **intranets** for sharing information and **collaborating** within the company, these **networks** usually being isolated from the surrounding Internet by special computer-security systems. Businesses also often rely on **extranets** which are extensions of a company's **intranet**.

One should mention some more important benefits of **e-commerce**. Due to its development the role of geographic distance in forming business relationships is being reduced. Some traditional businesses are being replaced by their electronic equivalents or are being made entirely useless. Prices of commodity products are generally lower on the web and it results not only from lower costs of doing electronic business but also from the ease comparison shopping in cyberspace. A new form of **collaboration** known as a virtual company is flourishing now. This type of company is actually as a **network** of firms, each performing some of the processes needed to manufacture a product or deliver a service.

### Different Types of Computers

A computer is one of the most brilliant inventions of mankind. Thanks to computer technology, we were able to achieve storage and processing of huge amounts of data; we could rest our brains by employing computer memory capacities for storage of information. Owing to computers, we have been able speed up daily work, carry out critical transactions and achieve accuracy and precision at work. Computers of the earlier times were of the size of a large room and were required to consume huge amounts of electric power. However, with the advancing technology, computers have shrunk to the size of a small watch. Depending on the processing power and size of computers, they have been classified under various types. Let us look at the classification of computers.

Following is a classification of the different types of computers based on their sizes and processing powers. Computers are categorized as mainframe and microcomputers.

Mainframe Computers: Large organizations use mainframes for highly critical applications such as bulk data processing. Most of the mainframe computers have capacities to host multiple operating systems and operate as a number of virtual machines. They can substitute for several small servers.

Microcomputers: A computer with a microprocessor and its central processing unit is known as a microcomputer. They do not occupy space as much as mainframes do. When supplemented with a keyboard and a mouse, microcomputers can be called personal computers (PC). A monitor, a keyboard and other similar input-output devices, computer memory and a power supply unit come packaged in a

microcomputer. These computers can fit on desks or tables and prove to be the best choice for single-user tasks.

Personal computers come in different forms such as desktops, laptops and personal digital assistants. Let us look at each of these types of computers.

Desktops: A desktop is intended to be used on a single location. The spare parts of a desktop computer are readily available at relatively lower costs. Power consumption is not as critical as that in laptops. Desktops are widely popular for daily use in the workplace and households.

Laptops: Similar in operation to desktops, laptop computers are miniaturized and optimized for mobile use. Laptops run on a single battery or an external adapter that charges the computer batteries. They are enabled with an inbuilt keyboard, touch pad acting as a mouse and a liquid crystal display. Their portability and capacity to operate on battery power have proven to be of great help to mobile users.

Netbooks: They fall in the category of laptops, but are inexpensive and relatively smaller in size. They had a smaller feature set and lesser capacities in comparison to regular laptops, at the time they came into the market. But with passing time, netbooks too began featuring almost everything that notebooks had. By the end of 2008, netbooks had begun to overtake notebooks in terms of market share and sales.

Personal Digital Assistants (PDAs): It is a handheld computer and popularly known as a palmtop. It has a touch screen and a memory card for storage of data. PDAs can also be used as portable audio players, web browsers and smartphones. Most of them can access the Internet by means of Bluetooth or Wi-Fi communication.

Tablet Computers: Tablets are mobile computers that are very handy to use. They use the touch screen technology. Tablets come with an onscreen keyboard or use a stylus or a digital pen. Apple's iPad redefined the class of tablet computers.

These were some of the different types of computers used today. Looking at the rate of advancement in technology, we can definitely look forward to many more in the near future.

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Методичні вказівки для організації самостійної роботи

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